UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,665	02/11/2005	Volker Hennige	265368US0XPCT	1535

22850 7590 02/01/2010

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
RHEE, JANE J

ART UNIT	PAPER NUMBER
1795	

NOTIFICATION DATE	DELIVERY MODE
02/01/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte VOLKER HENNINGE, CHRISTIAN HYING,
GERHARD HORPEL, and SVEN AUGUSTIN

Appeal 2009-011171
Application 10/524,665
Technology Center 1700

Decided: January 28, 2010

Before BRADLEY R. GARRIS, CHARLES F. WARREN, and
TERRY J. OWENS, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

DECISION ON APPEAL

Applicants appeal to the Board from the decision of the Primary Examiner finally rejecting claims 1-12, 30, and 31 in the Office Action mailed April 14, 2008. 35 U.S.C. §§ 6 and 134(a) (2002); 37 C.F.R. § 41.31(a) (2008).

An oral hearing was held January 21, 2008.

We reverse the decision of the Primary Examiner.

Claim 1 illustrates Appellants' invention of a separator-electrode unit capable of functioning in a lithium battery as a separator-electrode unit, and is representative of the claims on appeal:

1. A separator-electrode unit capable of functioning in a lithium battery as a separator-electrode unit, the unit comprising a porous electrode and a separator layer applied to said porous electrode, wherein the separator-electrode unit comprises an inorganic separator unit which comprises at least two fractions of metal oxide particles which differ from each other in their average particle size and/or in the metal, the separator layer comprising metal oxide particles having an average particle size (D_g) which is greater than the average pore size (d) of the pores of the porous electrode that are adhered together by metal oxide particles having an average particle size (D_k) which is smaller than the pores of the porous electrode.

The Examiner relies upon the evidence in these references (Ans. 2):

Yamashita	US 6,287,720 B1	Sep. 11, 2001
Penth	US 6,299,778 B1	Oct. 9, 2001

Appellants request review of the ground of rejection under 35 U.S.C. § 103(a) advanced on appeal by the Examiner: claims 1-12, 30, and 31 over Yamashita in view of Penth. App. Br. 2; Ans. 3.

Opinion

The dispositive issue entails the interpretation of the claim language "wherein the separator-electrode unit comprises an inorganic separator unit which comprises at least two fractions of metal oxide particles which differ from each other in their average particle size and/or in the metal, the separator layer comprising metal oxide particles . . . that are adhered together by metal oxide particles" of independent claim 1 by giving the terms thereof the broadest reasonable interpretation in their ordinary usage in context as they would be understood by one of ordinary skill in the art in light of the written description in the Specification. *See, e.g., In re ICON*

Health and Fitness, Inc., 496 F.3d 1374, 1378-79 (Fed. Cir. 2007); *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004), and cases cited therein; *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997).

On this record, we agree with Appellants that the claim "term 'an inorganic separator layer' necessarily excludes the presence of organic materials" in the separator. App. Br. 5. Indeed, we find no basis in the language of the appealed claims or in the Specification to interpret the term "inorganic separator layer" in claim 1 as including "organic" ingredients. *See* Spec., e.g., 3-7. We further note, in this respect, that claim 1 includes the requirement "the separator layer comprising metal oxide particles . . . that are adhered together by metal oxide particles." Thus, in view of the explicit claim requirement that the separator layer is "inorganic," we further agree with Appellants that, contrary to the Examiner's position, the open-ended terms "comprises" and "comprising" in claim 1 do not open claim 1 to include a separator-electrode unit which has "an inorganic separator layer" that includes "organic" ingredients. App. Br. 5; Ans. 7. *See In re Skvorecz*, 580 F.3d 1262, 1267 (Fed. Cir. 2009), and case cited therein (the term comprising "simply means that the device may contain elements in addition to those explicitly mentioned in the claim").

We agree with Appellants that Yamashita's separators are prepared with an organic binder and thus, an "organic" ingredient. Ans. 7. In this respect, as Appellants point out and contrary to the Examiner's position, one of ordinary skill in this art would not have interpreted the term "preferred" in the phrase "it is preferred that the porous separator further comprises a binder in order to bind the particles together," among other things, inorganic

particles, in Yamashita to describe a separator that does not include an organic binder when the language is considered in light of Yamashita's disclosure taken as a whole. App. Br. 3-4; Ans. 7. Indeed, we find Yamashita clearly requires a binder to maintain the porous structure of the separator. Yamashita, e.g., col. 3, ll. 30-35, col. 4, l. 20 to col. 5, l. 4, and col. 5, ll. 24-35. We further find that Yamashita's separator can have, among other things, a ratio of organic binder to inorganic particles of 1/500, as the Examiner points out. Ans. 7. Yamashita col. 7, l. 56 to col. 8, l. 4. We cannot subscribe to the Examiner's position that a separator so constituted "can be defined as an inorganic separator because the separator can consist of mostly inorganic particles" because of the presence of an "organic" binder, as Appellants argue. Ans. 7; App. Br. 5. In these respect, we noted above the claim requirement that the separator layer includes metal oxide particles adhered together by metal oxide particles.

On this record, the Examiner has not adduced scientific reasoning or evidence establishing that one of ordinary skill in this art would have modified Yamashita's separators by eliminating the organic binder, thus resulting in an "inorganic" separator as claimed in claim 1. Thus, the Examiner has not established that the combined teachings of Yamashita and Penth provide the factual foundation for a conclusion of prima facie obviousness under § 103(a). *See, e.g.*, *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992); *In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967).

Accordingly, in the absence of a prima facie case of obviousness, we reverse the ground of rejection of the appealed claims under 35 U.S.C. § 103(a).

The Primary Examiner's decision is reversed.

REVERSED

tc

OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314